

Silicon Carbide Production



Proposed Rule: Mandatory Reporting of Greenhouse Gases

Under the proposed Mandatory Reporting of Greenhouse Gases (GHGs) rule, owners or operators of facilities that contain silicon carbide production (as defined below) would report emissions from silicon carbide production processes and all other source categories located at the facility for which methods are defined in the rule. Owners or operators would collect emission data; calculate GHG emissions; and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting.

How Is This Source Category Defined?

Under the proposal, the silicon carbide production source category consists of any process that produces silicon carbide for abrasive purposes.

What GHGs Would Be Reported?

The proposal calls for silicon carbide production facilities to report carbon dioxide (CO₂) and methane (CH₄) process emissions from all silicon carbide production processes at the facility combined.

In addition, each facility would report GHG emissions for other source categories for which calculation methods are provided in the rule. For example, facilities would report CO₂, nitrous oxide (N₂O), and CH₄ emissions from each stationary combustion unit on site by following the requirements of 40 CFR part 98, subpart C (General Stationary Fuel Combustion Sources). Please refer to the relevant information sheet for a summary of the proposal for calculating and reporting emissions from any other source categories at the facility.

How Would GHG Emissions Be Calculated?

For CO₂ emissions, the proposal calls for facilities to use one of two methods, as appropriate:

- Silicon carbide production units with certain types of continuous emissions monitors (CEMS) in place would report using the CEMS and follow the methodology of 40 CFR part 98, subpart C to report total CO₂ emissions from calcination and fuel combustion. At other silicon carbide production units, the use of CEMS would be optional.
- Facilities without CEMS would calculate CO₂ emissions using the measured petroleum coke consumption and a quarterly facility-specific emission factor. The facility-specific emission factor is the carbon content of the petroleum coke (provided by the supplier or measured quarterly by an offsite laboratory) adjusted for carbon in the silicon carbide product.

For CH₄ emissions, the owner or operator would use the measured petroleum coke consumption and a default emission factor of 10.2 kilograms (kg) per metric ton of coke consumed.

What Information Would Be Reported?

This document was developed for the *Proposed* Mandatory GHG Reporting Rule. For the final document, please visit the *final* [Mandatory Reporting of Greenhouse Gases Rule](#).

In addition to the information required by the General Provisions at 40 CFR 98.3(c), the proposal calls for each silicon carbide production facility to report the following information:

- Annual CO₂ and CH₄ emissions from all silicon carbide production processes at the facility combined.
- Annual silicon carbide production capacity.
- Annual silicon carbide production.
- Annual operating hours.
- Quarterly facility-specific emission factors.

Facilities that use CEMS would also report the data specified in 40 CFR 98.34(d) of subpart C (General Stationary Fuel Combustion Sources).

For More Information

This series of information sheets is intended to assist reporting facilities/owners in understanding key provisions of the proposed rule. However, these information sheets are not intended to be a substitution for the rule. Visit EPA's Web site (www.epa.gov/climatechange/emissions/ghgrulemaking.html) for more information, including the proposed preamble and rule and additional information sheets on specific industries, or go to www.regulations.gov to access the rulemaking docket (EPA-HQ OAR-2008-0508). For questions that cannot be answered through the Web site or docket, call 1-877-GHG-1188.